THE FLORIDA SEA-MONSTER.

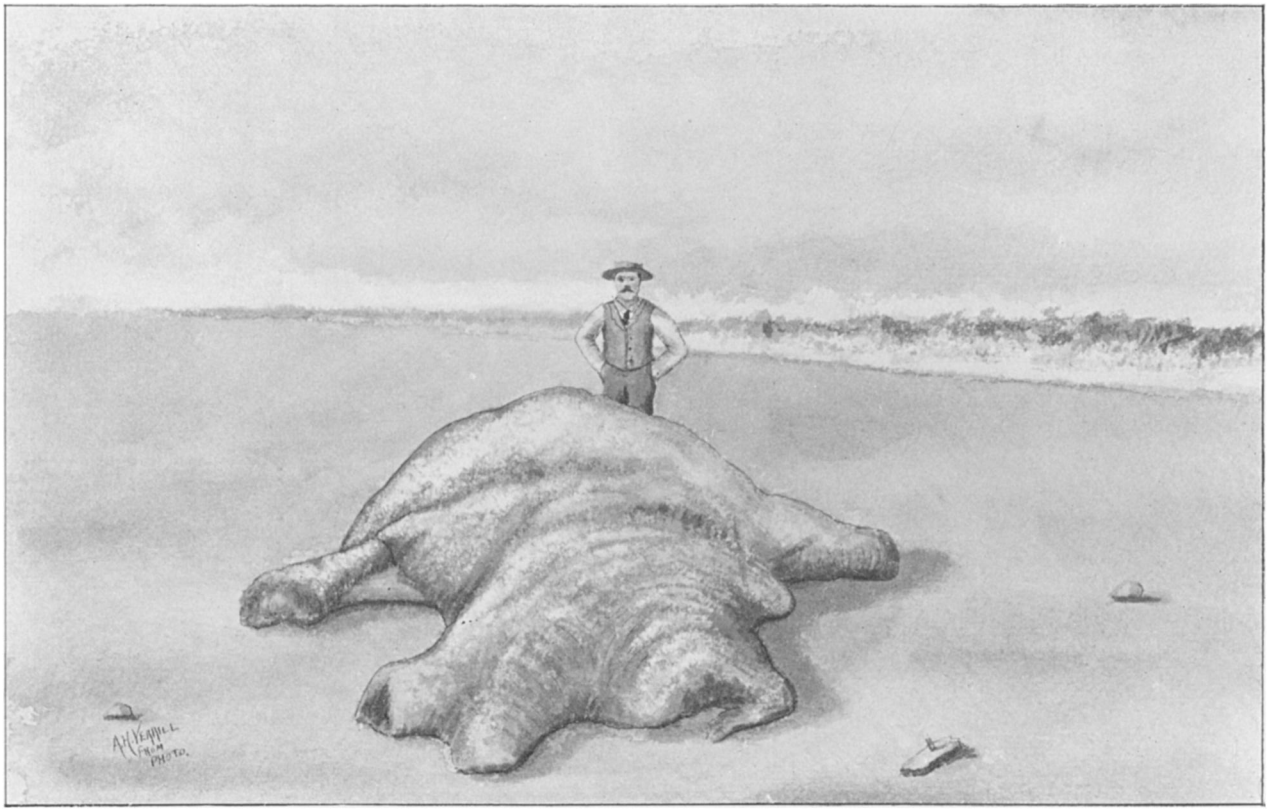
By A. E. Verrill.

On the 5th of December, 1896, a portion of a very large marine animal was cast ashore on the beach twelve miles south of St. Augustine, Florida. When it first came ashore it was much mutilated at one end, and had evidently been dead some time, and was, apparently, in an advanced state of decomposition. Contrary to expectation, it has resisted further decay, and still remains, after more than three months, nearly in the same state as at first. It was first brought to my notice by Dr. De Witt Webb, who has devoted a great amount of time and labor to its investigation and preservation. Through him I have received a dozen different photographic views of it, taken at different times, and showing it both in its original state and when it had been moved and partly turned over. Quite recently he has sent me several large masses of the thick and firm integument, of which the mass is mainly composed. By his efforts it has recently (with much labor) been moved several miles nearer to St. Augustine, to the terminus of a railroad, and protected from the drifting sand. It is likely to keep some months longer without much change, and to be visited by large numbers of people. The figures now given are copied from photographs made two days after it came ashore. At that time the sand had collected around it to the depth of about eighteen inches.

Its length is 21 feet; breadth about 7 feet; height about 4½ feet, when the sand was removed. It weight was estimated at about 7 tons.

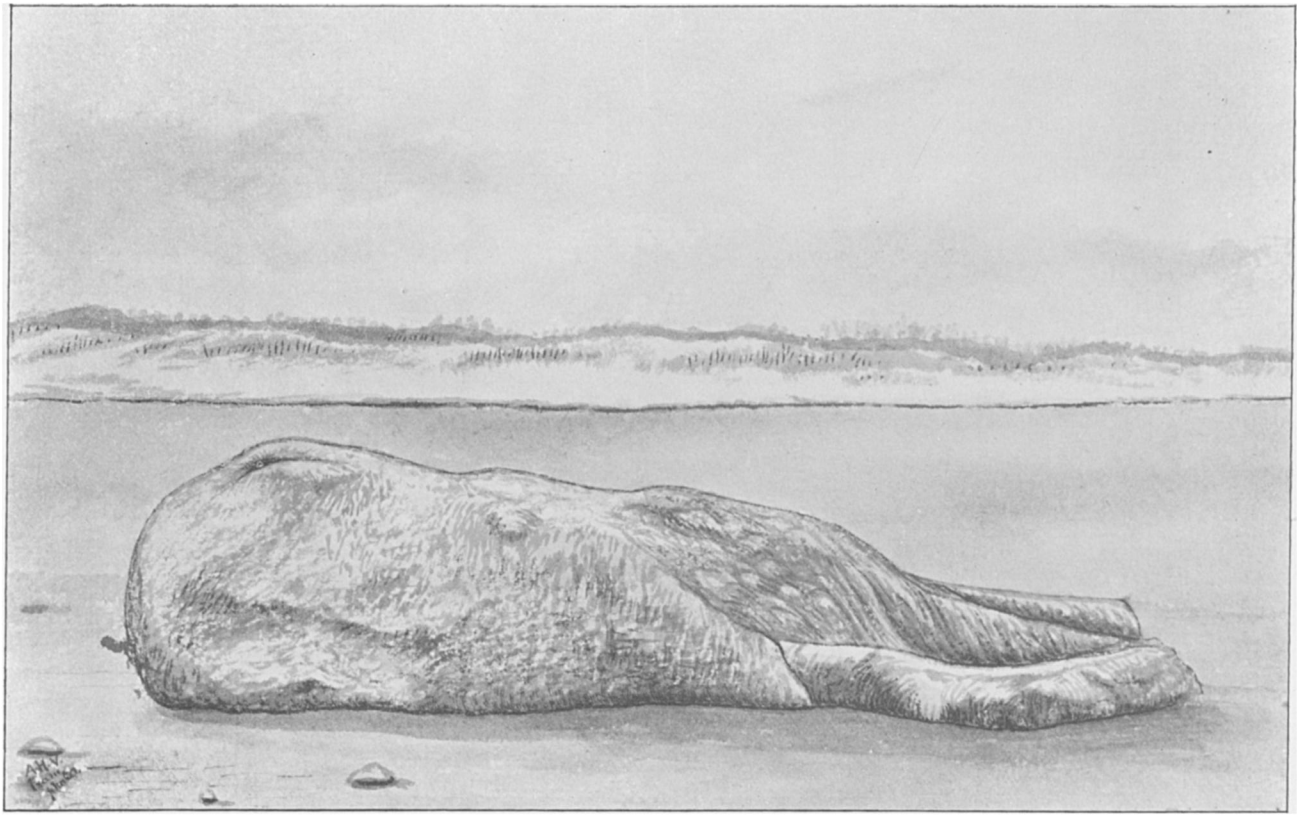
As shown by the figures, it has an elongated, pear-shaped form, broadly rounded at the larger, closed end, and considerably flattened toward the smaller and much mutilated end. At this end, as shown in both views, there are large, divergent ridges covered by the frayed-out fibrous tissues. These ridges are folds of the integument, but were at first mistaken for the stumps of arms, like those of an *Octopus*, and were so described

PLATE VII.



The Florida Monster, end view, from a photograph.

PLATE VIII.



The Florida monster, side view, from a photograph.

in letters received by me. Moreover, Mr. Wilson who visited it, when first found, claimed to have found a portion of an attached arm, 36 feet long, buried in the sand. This last statement, in the light of later investigations, must have been erroneous and was entirely misleading.[1] At that time, however, it seemed quite consistent with the form and appearance of the mass, which was described by Dr. Webb as closely similar to the body of the common small octopus. The photographs show this resemblance very clearly; and the ridges at the mutilated end, then supposed to be the stumps of mutilated arms, seemed to confirm the view that the mass was the mutilated body of a huge octopus,[2] and as such it was described by me in the *American Journal of Science* and elsewhere.

As soon as specimens of the tissues were sent to me, even a hasty examination was sufficient to show that this view was not correct, for instead of being composed of hardened muscular fibers,[3] as had been supposed, the thick masses of tissue were found to consist almost wholly of a hard, elastic complex of connective tissue fibers of large size. The masses sent vary from four to ten inches in thickness. They are white, and so tough that it is hard to cut them, even with a razor, and yet they are somewhat flexible and elastic. The fibers are much interlaced in all directions, and are of all sizes up to the size of coarse twine and small cords. The larger fibers unite to form bundles extending from the inner surface radially. According to Dr. Webb, who opened the mass, these cords were attached

[1] The memoradum written by Mr. Wilson and forwarded to me by Dr. Webb is as follows: "One arm lying west of body, 23 feet long; one stump of arm about 4 feet long; three arms lying south of body and from appearance attached to same (although I did not dig quite to body, as it laid well down in the sand and I was very tired), longest one measured over 23 feet, the other arms were three to five feet shorter."

[2] This was also the opinion of a large number of naturalists who saw the photographs sent to me.

[3] A highly contractile muscular integument is an essential feature of all cephalopods.

Statements that the creature cannot be an Octopus, but is of cetacean nature, were published by me in several local daily papers within a day or two after the specimens were first examined by me, and shortly afterwards in the *New York Herald* and in *Science*.

in large numbers to a central saccular organ, which occupied a large part of the interior of the thicker part of the specimen. This might, perhaps, represent the spermaceti case. Naturally most of the interior parts had decomposed long before it was opened,[4] so that we lack details of the interior structure. Externally there is but little trace of cuticle. The surface is close-grained and somewhat rough, with occasional gray patches of what may be remnants of the outer skin, much altered by decay. The thick masses contain a slight amount of oil, and smell like rancid whale oil, but they sink quickly in water, owing to their great density. No muscular tissue was present in any of the masses sent, nor were there any spaces from which such tissues might have disappeared by decay.

It is evident that such a dense and thick covering of fibrous connective tissue could not have come from any mobile part of any animal, but must have served for passive resistance to great pressure or concussion.

The structure of this integument is more like that of the upper part of the head of a sperm whale than any other known to me, and as the obvious use is the same, it is most probable that the whole mass represents the upper part of the head of such a whale, detached from the skull and jaw. It is evident, however, from the figures, that the shape is decidedly unlike that of the head of an ordinary sperm whale,[5] for the latter is oblong, truncated and rather narrow in front, "like the prow of a vessel," with an angle at the upper front end, near which the single blow-hole is situated. No blow-hole has been discovered in the mass cast ashore. There is a depression, shown in the side-view, near the large end, that I at one time thought

[4] It should be stated that after visiting the specimen, two days after it came ashore, Dr. Webb did not again see it for several weeks, owing to very stormy weather and its distance from St. Augustine. Nor did anyone suppose, at that time, that its tissues could be preserved or utilized for study, owing to its apparently advanced decomposition. The outer skin rapidly decayed, but the fibrous mass seems very durable.

[5] The dimensions of the head of a large sperm whale, 84 feet long, are given as follows: Length, about 25 feet; depth, 8 to 9 feet; breadth, 5 to 6 feet. The blow-hole is like a slit, about a foot long, and has a sigmoid curve. It is on the left side, close to the tip of the nose. The spermaceti case occupies a large space within the right side of the head. It is supported by strong fibrous tendons.

might be a blow-hole; but Dr. Webb states, that it is a "sulcus" or pit about two feet long and six inches deep, apparently not connected with the interior cavity and probably due to mutilation. The specimen was doubtless floated ashore by the gases of decomposition accumulated in the interior cavity, indicating the absence of any free external opening to it, from which the gases could escape.

Photographs made of the under side of the thicker part, when it was turned up by powerful tackle, show an irregular roughness on that side, extending well forward, but not to the end. This roughness may be due to abrasion, or it may show where the skull was attached. If the mass really came from the head of a sperm whale, it would seem that it must have projected farther forward beyond the upper jaw than does the nose of an ordinary sperm whale, and it would, apparently, have been much broader and blunter, or "bottle-nosed." It is possible, of course, that its form has changed considerably since death; but in view of its wonderful toughness and firmness, no great change of the larger end, supposed to be the anterior or nose-end, is probable. All the pulling and hauling and turning of it partly over, by the aid of six horses and strong tackle, have not served to change its shape materially, or rather its elasticity serves to restore it to its former shape. Its toughness and elasticity remind one of the properties of thick vulcanized rubber.

It is possible to imagine a sperm whale with an abnormally enlarged nose, due to disease or extreme old age, which, if detached, might resemble this mass externally at least. It seems hardly probable that another allied whale, with a big nose, remains to be discovered. Notwithstanding these difficulties, my present opinion, that it came from the head of a creature like a sperm whale in structure, is the only one that seems plausible from the facts now ascertained.